

SUSTAINABLE AND HEALTHY COMMUNITIES RESEARCH

Revolutionizing EPA Research

The U.S. Environmental Protection Agency (EPA) is blazing a path forward to address today's most challenging environmental problems while proactively anticipating those of the future. Today's environmental problems are increasingly more complex and require an innovative research approach that provides effective, efficient and sustainable solutions.

This approach to EPA research requires the diverse capabilities of scientists and engineers as well as economists, social scientists, and policy makers. EPA research plans must incorporate continuous input from external stakeholders such as Federal, State, and local government agencies, non-governmental organizations, industry, and communities affected by environmental problems.

Research innovations are needed to meet the environmental challenges of the 21st Century. EPA is aligning and integrating its research into six priority program areas to meet these needs. They are:

- Air, Climate, and Energy
- Safe and Sustainable Water Resources
- Sustainable and Healthy Communities



- Chemical Safety for Sustainability
- Human Health Risk Assessment
- Homeland Security

Background

One of EPA's top priorities is to support sustainable communities that protect human health and well-being and the ecosystem services or natural benefits upon which they depend, such as clean water and air.

Communities are increasingly challenged to find sustainable solutions to urbanization; competition for food, materials, and energy; growing waste streams; changing climate; and socioeconomic inequities, among other pressures.

To be sustainable, communities need more efficient and effective strategies and approaches that

protect and improve community health, while they simultaneously protect and improve nature's benefits.

EPA's Sustainable and Healthy Communities research is responding to this need. Researchers are entering into an extensive dialogue with community leaders, stakeholders, and non-governmental organizations across the nation to better understand the challenges they face.

Based on what is learned from these interactions, research will be conducted that can be used to better weigh and integrate human health, socio-economic, and environmental factors into decisions about both built and natural environments.

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EPA will provide decision makers with information, approaches, and tools to:

- Effectively assess current conditions
- Evaluate the outcomes of alternative policies
- Identify indicators that can be used to track their progress toward sustainability goals

Research Focus Areas

Sustainable and Healthy Communities research is focused on three main areas:

1. Develop comprehensive approaches to help communities become more sustainable

The research will help communities develop sustainable solutions to environmental problems and reduce unintended consequences such as air or water pollution.

Research will focus on problems that are widespread across communities in the U.S. such as water quality and land-use issues as well as comprehensive approaches to help communities address multiple barriers to sustainability in an integrated way.

The research aims to assist decision makers in individual communities and communities in a region where cooperation could help to solve common problems or deal with potentially conflicting goals.

2. Develop decision support tools, models and metrics that can be used to improve sustainable community practices

The research will develop decision support tools, models, and metrics that can be used to improve community sustainability.

Examples include web-based decision support tools to help local managers and stakeholders analyze and visualize the consequences of alternative policy decisions. These tools would extend beyond particular problems such as traffic congestion or water use to include consequences with respect to other environmental issues, economic impacts, and social impacts on different segments of the community.

These tools will use the latest advancements in decision analysis to be sure that they are as useful and accurate as possible.

Research will also develop models and data bases that will enhance the capabilities of the decision support tools. The models will take into account the interactions between human health, ecosystem services, and the costs and benefits of alternative choices about how to solve environmental problems in ways that are sustainable over time.

EPA scientists will help communities identify and/or develop indicators that can be used to measure and evaluate the environmental integrity of their community, diagnose problems, and track the performance of various approaches.

3. Meet EPA's regulatory requirements

EPA has high-priority needs for research and expertise to develop and support regulations, protect environmental health and conduct environmental monitoring, and other priorities.

Sustainable and Healthy Communities research will conduct highly focused, short-term research to meet specific regulatory or other operational needs of EPA in the areas of waste management, site remediation, ecosystem services, community health, green technology, and environmental justice.

Timeline

EPA will develop a Research Action Plan that outlines in more detail the research to be conducted. The goal is to fully implement this integrated, transdisciplinary approach to research by October 2011.

Web site:

<http://www.epa.gov/research/priorities/sustainablecommunities.htm>

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